



39780-1216R1D4 saved November 17 2005.TXT

SEQUENCE LISTING

<110> Ashkenazi, Avi J.  
Fong, Sherman  
Goddard, Audrey  
Gurney, Austin L.  
Napier, Mary A.  
Tumas, Daniel  
Wood, William I.

<120> COMPOUNDS, COMPOSITIONS AND METHODS FOR  
THE TREATMENT OF DISEASES CHARACTERIZED BY A33- RELATED  
ANTIGENS

<130> 39780-1216R1D4

<140> 10/785,220

<141> 2004-02-24

<150> US 09/254,465

<151> 1999-03-05

<150> PCT/US98/24855

<151> 1998-11-20

<150> US 60/066,364

<151> 1997-11-21

<150> US 60/078,936

<151> 1998-03-20

<150> PCT/US98/19437

<151> 1998-09-17

<160> 30

<170> FastSEQ for windows Version 4.0

<210> 1

<211> 299

<212> PRT

<213> Homo sapiens

<400> 1

Met	Gly	Thr	Lys	Ala	Gln	Val	Glu	Arg	Lys	Leu	Leu	Cys	Leu	Phe	Ile
1				5					10					15	
Leu	Ala	Ile	Leu	Leu	Cys	Ser	Leu	Ala	Leu	Gly	Ser	Val	Thr	Val	His
		20						25					30		
Ser	Ser	Glu	Pro	Glu	Val	Arg	Ile	Pro	Glu	Asn	Asn	Pro	Val	Lys	Leu
		35					40					45			
Ser	Cys	Ala	Tyr	Ser	Gly	Phe	Ser	Ser	Pro	Arg	Val	Glu	Trp	Lys	Phe
	50					55				60					
Asp	Gln	Gly	Asp	Thr	Thr	Arg	Leu	Val	Cys	Tyr	Asn	Asn	Lys	Ile	Thr
65					70					75				80	
Ala	Ser	Tyr	Glu	Asp	Arg	Val	Thr	Phe	Leu	Pro	Thr	Gly	Ile	Thr	Phe
			85					90					95		
Lys	Ser	Val	Thr	Arg	Glu	Asp	Thr	Gly	Thr	Tyr	Thr	Cys	Met	Val	Ser
			100					105					110		
Glu	Glu	Gly	Gly	Asn	Ser	Tyr	Gly	Glu	Val	Lys	Val	Lys	Leu	Ile	Val
		115					120					125			
Leu	Val	Pro	Pro	Ser	Lys	Pro	Thr	Val	Asn	Ile	Pro	Ser	Ser	Ala	Thr
		130				135					140				

39780-1216R1D4 saved November 17 2005.TXT

```

Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro
145      150      155      160
Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn
      165      170      175
Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro
      180      185      190
Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly
      195      200      205
Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser
      210      215      220
Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
225      230      235      240
Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly
      245      250      255
Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly
      260      265      270
Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala Arg Ser Glu
      275      280      285
Gly Glu Phe Lys Gln Thr Ser Phe Leu Val
      290      295

```

<210> 2  
 <211> 321  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2
Met Gly Ile Leu Leu Gly Leu Leu Leu Leu Gly His Leu Thr Val Asp
1      5      10      15
Thr Tyr Gly Arg Pro Ile Leu Glu Val Pro Glu Ser Val Thr Gly Pro
      20      25      30
Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro Leu Gln Gly
      35      40      45
Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg Gly Ser Asp Pro
      50      55      60
Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp His Ile Gln Gln Ala
65      70      75      80
Lys Tyr Gln Gly Arg Leu His Val Ser His Lys Val Pro Gly Asp Val
      85      90      95
Ser Leu Gln Leu Ser Thr Leu Glu Met Asp Asp Arg Ser His Tyr Thr
      100      105      110
Cys Glu Val Thr Trp Gln Thr Pro Asp Gly Asn Gln Val Val Arg Asp
      115      120      125
Lys Ile Thr Glu Leu Arg Val Gln Lys Leu Ser Val Ser Lys Pro Thr
      130      135      140
Val Thr Thr Gly Ser Gly Tyr Gly Phe Thr Val Pro Gln Gly Met Arg
145      150      155      160
Ile Ser Leu Gln Cys Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile
      165      170      175
Trp Tyr Lys Gln Gln Thr Asn Asn Gln Glu Pro Ile Lys Val Ala Thr
      180      185      190
Leu Ser Thr Leu Leu Phe Lys Pro Ala Val Ile Ala Asp Ser Gly Ser
      195      200      205
Tyr Phe Cys Thr Ala Lys Gly Gln Val Gly Ser Glu Gln His Ser Asp
      210      215      220
Ile Val Lys Phe Val Val Lys Asp Ser Ser Lys Leu Leu Lys Thr Lys
225      230      235      240
Thr Glu Ala Pro Thr Thr Met Thr Tyr Pro Leu Lys Ala Thr Ser Thr
      245      250      255
Val Lys Gln Ser Trp Asp Trp Thr Thr Asp Met Asp Gly Tyr Leu Gly
      260      265      270
Glu Thr Ser Ala Gly Pro Gly Lys Ser Leu Pro Val Phe Ala Ile Ile

```

	275					280					285				
Leu	Ile	Ser	Leu	Cys	Cys	Met	Val	Val	Phe	Thr	Met	Ala	Tyr	Ile	
290					295					300					
Met	Leu	Cys	Arg	Lys	Thr	Ser	Gln	Gln	Glu	His	Val	Tyr	Glu	Ala	Ala
305					310					315					320
Arg															

&lt;210&gt; 3

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Consensus DNA Sequence

&lt;400&gt; 3

cttcttgcca	actggtatca	ccttcaagtc	cgtgacacgg	gaagacactg	ggacatacac	60
ttgtatggtc	tctgaggaag	gcggcaacag	ctatggggag	gtcaagggtca	agctcatcgt	120
gcttgtgcct	ccatccaagc	ctacagttaa	catccccctc	tctgccacca	ttgggaaccg	180
ggcagtgtctg	acatgctcag	aacaagatgg	ttccccacct	tctgaatata	cctgggttcaa	240
agatgggata	gtgatgccta	cgaatcccaa	aagcaccctg	gccttcagca	actcttccta	300
tgtcctgaat	cccacaacag	gagagctggt	ctttgatccc	ctgtcagcct	ctgatactgg	360
agaatacagc	tgtgaggcac	ggaatgggta				390

&lt;210&gt; 4

&lt;211&gt; 726

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Consensus DNA Sequence

&lt;400&gt; 4

tctcagtcct	ctcgtctgtag	tcgcggagct	gtgtttctgtt	tcccaggagt	ccttcggcgg	60
ctgtttgtgt	caggtgcgcc	tgatcgcgat	ggggacaaaag	gcgcaagctc	gagagggaaac	120
tgttgtgcct	cttcataattg	gcgatcctgt	tgtgctccct	ggcattgggc	agtgttacag	180
ttgcactctt	ctgaacctga	agtcagaatt	cctgagaata	atcctgtgaa	gttgtcctgt	240
gcctactcgg	gcttttcttc	tccccgtgtg	gagtgggaagt	ttgaccaagg	agacaccacc	300
agactcgttt	gctataataa	caagatcaca	gcttcctatg	aggaccgggt	gaccttcttg	360
ccaactggta	tcaccttcaa	gtccgtgaca	cggaagaca	ctgggacata	cacttgtatg	420
gtctctgagg	aaggcggcaa	cagctatggg	gaggtcaagg	tcaagctcat	cgtgcttgtg	480
cctccatcca	agcctacagt	taacatcccc	tcctctgcca	ccattgggaa	ccgggcagtg	540
ctgacatgct	cagaacaaga	tggttcccca	ccttctgaat	acacctggtt	caaagatggg	600
atagtgatgc	ctacgaatcc	caaaagcacc	cgtgccttca	gcaactcttc	ctatgtcctg	660
aatcccacaa	caggagagct	ggtctttgat	cccctgtcag	cctctgatac	tggagaatac	720
agctgt						726

&lt;210&gt; 5

&lt;211&gt; 1503

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Consensus DNA Sequence

&lt;400&gt; 5

gcaggcaaaag	taccagggcc	gcctgcatgt	gagccacaag	gttccaggag	atgtatccct	60
ccaattgagc	accctggaga	tgatgaccg	gagccactac	acgtgtgaag	tcacctggca	120
gactcctgat	ggcaaccaag	tcgtgagaga	taagattact	gagctccgtg	tccagaaact	180
ctctgtctcc	aagcccacag	tgacaactgg	cagcggttat	ggcttcacgg	tgcccagggt	240
aatgaggatt	agccttcaat	gccagggttc	ggggtttctc	tcccatcagt	tatatttggt	300

39780-1216R1D4 saved November 17 2005.TXT

```

ataagcaaca gactaataac caggaaccc atcaaagtag caaccctaag taccttactc 360
ttcaagcctg cgggtagtagc cgactcaggc tcctatttct gcactgccaa gggccagggt 420
ggctctgagc agcacagcga cattgtgaag tttgtggtca aagactcctc aaagctactc 480
aagaccaaga ctgaggcacc tacaaccatg acatacccct tgaaagcaac atctacagtg 540
aagcagtcct gggactggac cactgacatg gatggctacc ttggagagac cagtgtctgg 600
ccaggaaaga gcctgcctgt ctttgccatc atcctcatca tctccttgtg ctgtatggtg 660
gtttttacca tggcctatat catgctctgt cgggaagacat cccaacaaga gcatgtctac 720
gaagcagcca gggcacatgc cagagaggcc aacgactctg gagaaacat gaggggtggc 780
atcttcgcaa gtggctgctc cagtgtgag ccaacttccc agaattctgg gcaacaacta 840
ctctgatgag ccttgcatag gacaggagta ccagatcatc gccagatca atggcaacta 900
cgcccgcctg ctggacacag ttctcttgga ttatgagttt ctggccactg agggcaaaag 960
tgtctgttaa aaatgcccc ttagggcagg atctgtctgac ataattgcct agtcagtcct 1020
tgccttctgc atggccttct tccctgtctc ctctcttctt ggatagccca aagtgtccgc 1080
ctaccaaac tggagcgcgt gggagtcact ggctttgccc tggaatttgc cagatgcac 1140
tcaagtaagc cagctgtctg atttggctct ggcccttctt agtatctctg ccgggggctt 1200
ctggtactcc tctctaaata ccagagggaa gatgcccata gcactaggac ttggtcatca 1260
tgcctacaga cactattcaa ctttggcatc ttgccaccag aagaccgag gggaggctca 1320
gctctgccag ctccagaggac cagctatata caggatcatt tctctttctt cagggccaga 1380
cagcttttaa ttgaaattgt tatttcacag gccagggttc agttctgctc ctccactata 1440
agtctaattg tctgactctc tcctggtgct caataaatat ctaatcataa cagcaaaaaa 1500
aaa

```

<210> 6  
 <211> 319  
 <212> PRT  
 <213> Homo sapiens

<400> 6

Met	Val	Gly	Lys	Met	Trp	Pro	Val	Leu	Trp	Thr	Leu	Cys	Ala	Val	Arg
1				5				10						15	
Val	Thr	Val	Asp	Ala	Ile	Ser	Val	Glu	Thr	Pro	Gln	Asp	Val	Leu	Arg
			20					25					30		
Ala	Ser	Gln	Gly	Lys	Ser	Val	Thr	Leu	Pro	Cys	Thr	Tyr	His	Thr	Ser
		35					40					45			
Thr	Ser	Ser	Arg	Glu	Gly	Leu	Ile	Gln	Trp	Asp	Lys	Leu	Leu	Leu	Thr
	50				55						60				
His	Thr	Glu	Arg	Val	Val	Ile	Trp	Pro	Phe	Ser	Asn	Lys	Asn	Tyr	Ile
65					70					75				80	
His	Gly	Glu	Leu	Tyr	Lys	Asn	Arg	Val	Ser	Ile	Ser	Asn	Asn	Ala	Glu
				85					90					95	
Gln	Ser	Asp	Ala	Ser	Ile	Thr	Ile	Asp	Gln	Leu	Thr	Met	Ala	Asp	Asn
			100					105					110		
Gly	Thr	Tyr	Glu	Cys	Ser	Val	Ser	Leu	Met	Ser	Asp	Leu	Glu	Gly	Asn
		115					120					125			
Thr	Lys	Ser	Arg	Val	Arg	Leu	Leu	Val	Leu	Val	Pro	Pro	Ser	Lys	Pro
	130					135					140				
Glu	Cys	Gly	Ile	Glu	Gly	Glu	Thr	Ile	Ile	Gly	Asn	Asn	Ile	Gln	Leu
145					150					155				160	
Thr	Cys	Gln	Ser	Lys	Glu	Gly	Ser	Pro	Thr	Pro	Gln	Tyr	Ser	Trp	Lys
				165					170					175	
Arg	Tyr	Asn	Ile	Leu	Asn	Gln	Glu	Gln	Pro	Leu	Ala	Gln	Pro	Ala	Ser
			180					185					190		
Gly	Gln	Pro	Val	Ser	Leu	Lys	Asn	Ile	Ser	Thr	Asp	Thr	Ser	Gly	Tyr
		195					200					205			
Tyr	Ile	Cys	Thr	Ser	Ser	Asn	Glu	Glu	Gly	Thr	Gln	Phe	Cys	Asn	Ile
	210					215					220				
Thr	Val	Ala	Val	Arg	Ser	Pro	Ser	Met	Asn	Val	Ala	Leu	Tyr	Val	Gly
225					230					235					240
Ile	Ala	Val	Gly	Val	Val	Ala	Ala	Leu	Ile	Ile	Ile	Gly	Ile	Ile	Ile
			245					250						255	
Tyr	Cys	Cys	Cys	Cys	Arg	Gly	Lys	Asp	Asn	Thr	Glu	Asp	Lys	Glu	
			260					265				270			
Asp	Ala	Arg	Pro	Asn	Arg	Glu	Ala	Tyr	Glu	Glu	Pro	Pro	Glu	Gln	Leu

275 280 285  
 Arg Glu Leu Ser Arg Glu Arg Glu Glu Asp Asp Tyr Arg Gln Glu  
 290 295 300  
 Glu Gln Arg Ser Thr Gly Arg Glu Ser Pro Asp His Leu Asp Gln  
 305 310 315

<210> 7  
 <211> 2181  
 <212> DNA  
 <213> Homo sapiens

<400> 7  
 cccacgcgtc cgccacgcg tccgcccacg ggtccgcccga cgcgtccggg ccaccagaag 60  
 tttgagcctc tttggtagca ggaggctgga agaaaggaca gaagtagctc tggctgtgat 120  
 ggggatctta ctgggcctgc tactcctggg gcacctaaca gtggacactt atggccgtcc 180  
 catcctggaa gtgccagaga gtgtaacagg accttggaaa ggggatgtga atcttccctg 240  
 cacctatgac cccctgcaag gctacaccca agtcttggtg aagtggctgg tacaacgtgg 300  
 ctgagaccct gtcaccatct ttctacgtga ctcttctgga gaccatatcc agcaggcaaa 360  
 gtaccagggc cgcttgcctg tgagccacaa gggtccagga gatgtatccc tccaattgag 420  
 caccctggag atggatgacc ggagccacta cagctgtgaa gtcacctggc agactcctga 480  
 tggcaaccaa gtcgtgagag ataagattac tgagctccgt gtccagaaac tctctgtctc 540  
 caagcccaca gtgacaactg gcagcgggta tggcttcacg gtgccccagg gaatgaggat 600  
 tagccttcaa tgccaggctc ggggttctcc tcccatcagt tatatttggg ataagcaaca 660  
 gactaataac caggaaccca tcaaagtagc aaccctaagt accttactct tcaagcctgc 720  
 ggtgatagcc gactcaggct cctatttctg cactgccaaag ggccagggtg gctctgagca 780  
 gcacagcgac atttgtgaagt ttgtggtcaa agactcctca aagctactca agaccaagac 840  
 tgaggcacct acaaccatga catacccctt gaaagcaaca tctacagtga agcagtcctg 900  
 ggactggacc actgacatgg atggctacct tggagagacc agtgctgggc caggaaagag 960  
 cctgcctgtc tttgccatca tcctcatcat ctcttgtgct tgtatgggtg tttttaccat 1020  
 ggcctatata atgctctgtc ggaagacatc ccaacaagag catgtctacg aagcagccag 1080  
 gtaagaaagt ctctcctctt ccatttttga ccccgctccct gccctcaatt ttgattactg 1140  
 gcaggaaaatg tggaggaagg ggggtgtggc acagacccaa tcctaaggcc ggaggccttc 1200  
 agggctcagga catagctgcc ttccctctct caggcacctt ctgagggtgt tttggccctc 1260  
 tgaacacaaa ggataattta gatccatctg ccttctgctt ccagaatccc tgggtggtag 1320  
 gatcctgata attaatggc aagaattgag gcagaagggg gggaaaccag gaccacagcc 1380  
 ccaagtccct tcttatgggt ggtgggctct tgggccatag ggcacatgcc agagaggcca 1440  
 acgactctgg agaaaccatg agggtggcc tcttcgcaag tggctgctcc agtgatgagc 1500  
 caacttccca gaactctggg acaactact ctgatgagcc ctgcatagga caggagtacc 1560  
 agatcatcgc ccagatcaat ggcaactacg cccgcctgct ggacacagtt cctctggatt 1620  
 atgagtttct ggccactgag ggcaaaagt tctgttaaaa atgccccatt aggccaggat 1680  
 ctgctgacat aattgcctag tcagtccttg ccttctgcat ggccttcttc cctgctacct 1740  
 ctcttctctg atagcccaa gtgtccgcct accaactctg gagccgctgg gactcactgg 1800  
 ctttgccctg gaatttgcca gatgcatctc aagtaggcca gctgctggat ttggctctgg 1860  
 gcccttctag tatctctgcc gggggcttct ggtactcctc tctaaatacc agagggaaga 1920  
 tgcccatagc actaggactt ggtcatcatg cctacagaca ctattcaact ttggcatctt 1980  
 gccaccagaa gacccgaggg aggtctagct ctgccagctc agaggaccag ctatatccag 2040  
 gatcatttct ctttcttcag ggccagacag cttttaattg aaattgttat ttcacaggcc 2100  
 agggttcagt tctgtctctc cactataagt ctaatgttct gactctctcc tgggtgctcaa 2160  
 taaatatcta atcataacag c 2181

<210> 8  
 <211> 1295  
 <212> DNA  
 <213> Homo sapiens

<400> 8  
 cccagaagtt caagggcccc cggcctcctg cgctcctgcc gccgggaccc tcgacctcct 60  
 cagagcagcc ggctgcccgc ccgggaagat ggcgaggagg agccgccacc gcctcctcct 120  
 gctgctgctg cgctacctgg tggctgcctt gggctatcat aaggcctatg ggttttctgc 180  
 cccaaaagac caacaagtat tcacagcagt agagtaccaa gaggctattt tagcctgcaa 240  
 aaccccaaag aagactgttt cctccagatt agagtggaaag aaactgggtc ggagtgtctc 300  
 ctttgtctac tatcaacaga ctcttcaagg tgattttaaa aatcgagctg agatgataga 360

39780-1216R1D4 saved November 17 2005.TXT

```

tttcaatatc cggatcaaaa atgtgacaag aagtgatgcg gggaaatatc gttgtgaagt 420
tagtgcccca tctgagcaag gccaaaacct ggaagaggat acagtcactc tggaagtatt 480
agtggctcca gcagttccat catgtgaagt accctcttct gctctgagtg gaactgtggt 540
agagctacga tgtcaagaca aagaagggaa tccagctcct gaatacacat ggtttaagga 600
tggcatccgt ttgctagaaa atcccagact tggctcccaa agcaccaaca gctcatacac 660
aatgaatata aaaactggaa ctctgcaatt taatactgtt tccaaactgg acactggaga 720
atattcctgt gaagcccga attctgttgg atatcgaggg tgcctggga aacgaatgca 780
agtagatgat ctcaacataa gtggcatcat agcagccgta gtagttgtgg ccttagtgat 840
ttccgtttgt ggccttgggt tatgctatgc tcagaggaaa ggctactttt caaaagaaac 900
ctccttccag aagagtaatt cttcatctaa agccacgaca atgagtgaat atgtgcagtg 960
gctcacgcct gtaatcccag cactttggaa ggccgcggcg ggcggatcac gaggtcagga 1020
gttctagacc agtctggcca atatggtgaa accccatctc tactaaaata caaaaattag 1080
ctgggcatgg tggcatgtgc ctgcagttcc agctgcttgg gagacaggag aatcacttga 1140
accggggagg cggaggttgc agtgagctga gatcacgcca ctgcagtcca gcctgggtaa 1200
cagagcaaga ttccatctca aaaaataaaa taaataaata aataaatact ggtttttacc 1260
tgtagaattc ttacaataaa tatagcttga tattc 1295

```

<210> 9  
 <211> 312  
 <212> PRT  
 <213> Homo sapiens

<400> 9

Met	Ala	Arg	Arg	Ser	Arg	His	Arg	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Tyr
1				5				10						15	
Leu	Val	Val	Ala	Leu	Gly	Tyr	His	Lys	Ala	Tyr	Gly	Phe	Ser	Ala	Pro
			20					25					30		
Lys	Asp	Gln	Gln	Val	Val	Thr	Ala	Val	Glu	Tyr	Gln	Glu	Ala	Ile	Leu
		35					40					45			
Ala	Cys	Lys	Thr	Pro	Lys	Lys	Thr	Val	Ser	Ser	Arg	Leu	Glu	Trp	Lys
	50					55					60				
Lys	Leu	Gly	Arg	Ser	Val	Ser	Phe	Val	Tyr	Tyr	Gln	Gln	Thr	Leu	Gln
65					70				75					80	
Gly	Asp	Phe	Lys	Asn	Arg	Ala	Glu	Met	Ile	Asp	Phe	Asn	Ile	Arg	Ile
				85					90					95	
Lys	Asn	Val	Thr	Arg	Ser	Asp	Ala	Gly	Lys	Tyr	Arg	Cys	Glu	Val	Ser
			100					105					110		
Ala	Pro	Ser	Glu	Gln	Gly	Gln	Asn	Leu	Glu	Glu	Asp	Thr	Val	Thr	Leu
		115					120					125			
Glu	Val	Leu	Val	Ala	Pro	Ala	Val	Pro	Ser	Cys	Glu	Val	Pro	Ser	Ser
		130				135					140				
Ala	Leu	Ser	Gly	Thr	Val	Val	Glu	Leu	Arg	Cys	Gln	Asp	Lys	Glu	Gly
145					150					155				160	
Asn	Pro	Ala	Pro	Glu	Tyr	Thr	Trp	Phe	Lys	Asp	Gly	Ile	Arg	Leu	Leu
			165						170					175	
Glu	Asn	Pro	Arg	Leu	Gly	Ser	Gln	Ser	Thr	Asn	Ser	Ser	Tyr	Thr	Met
			180					185					190		
Asn	Thr	Lys	Thr	Gly	Thr	Leu	Gln	Phe	Asn	Thr	Val	Ser	Lys	Leu	Asp
		195					200					205			
Thr	Gly	Glu	Tyr	Ser	Cys	Glu	Ala	Arg	Asn	Ser	Val	Gly	Tyr	Arg	Arg
	210					215					220				
Cys	Pro	Gly	Lys	Arg	Met	Gln	Val	Asp	Asp	Leu	Asn	Ile	Ser	Gly	Ile
225					230					235				240	
Ile	Ala	Ala	Val	Val	Val	Val	Ala	Leu	Val	Ile	Ser	Val	Cys	Gly	Leu
			245						250					255	
Gly	Val	Cys	Tyr	Ala	Gln	Arg	Lys	Gly	Tyr	Phe	Ser	Lys	Glu	Thr	Ser
			260					265					270		
Phe	Gln	Lys	Ser	Asn	Ser	Ser	Ser	Lys	Ala	Thr	Thr	Met	Ser	Glu	Asn
		275					280					285			
Val	Gln	Trp	Leu	Thr	Pro	Val	Ile	Pro	Ala	Leu	Trp	Lys	Ala	Ala	Ala
	290					295					300				
Gly	Gly	Ser	Arg	Gly	Gln	Glu	Phe								
305					310										

<210> 10  
 <211> 300  
 <212> PRT  
 <213> Mus musculus

<400> 10  
 Met Gly Thr Glu Gly Lys Ala Gly Arg Lys Leu Leu Phe Leu Phe Thr  
 1 5 10 15  
 Ser Met Ile Leu Gly Ser Leu Val Gln Gly Lys Gly Ser Val Tyr Thr  
 20 25 30  
 Ala Gln Ser Asp Val Gln Val Pro Glu Asn Glu Ser Ile Lys Leu Thr  
 35 40 45  
 Cys Thr Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe Val  
 50 55 60  
 Gln Gly Ser Thr Thr Ala Leu Val Cys Tyr Asn Ser Gln Ile Thr Ala  
 65 70 75 80  
 Pro Tyr Ala Asp Arg Val Thr Phe Ser Ser Gly Ile Thr Phe Ser  
 85 90 95  
 Ser Val Thr Arg Lys Asp Asn Gly Glu Tyr Thr Cys Met Val Ser Glu  
 100 105 110  
 Glu Gly Gly Gln Asn Tyr Gly Glu Val Ser Ile His Leu Thr Val Leu  
 115 120 125  
 Val Pro Pro Ser Lys Pro Thr Ile Ser Val Pro Ser Ser Val Thr Ile  
 130 135 140  
 Gly Asn Arg Ala Val Leu Thr Cys Ser Glu His Asp Gly Ser Pro Pro  
 145 150 155 160  
 Ser Glu Tyr Ser Trp Phe Lys Asp Gly Ile Ser Met Leu Thr Ala Asp  
 165 170 175  
 Ala Lys Lys Thr Arg Ala Phe Met Asn Ser Ser Phe Thr Ile Asp Pro  
 180 185 190  
 Lys Ser Gly Asp Leu Ile Phe Asp Pro Val Thr Ala Phe Asp Ser Gly  
 195 200 205  
 Glu Tyr Tyr Cys Gln Ala Gln Asn Gly Tyr Gly Thr Ala Met Arg Ser  
 210 215 220  
 Glu Ala Ala His Met Asp Ala Val Glu Leu Asn Val Gly Gly Ile Val  
 225 230 235 240  
 Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Leu Leu Ile Phe Gly  
 245 250 255  
 Val Trp Phe Ala Tyr Ser Arg Gly Tyr Phe Glu Thr Thr Lys Lys Gly  
 260 265 270  
 Thr Ala Pro Gly Lys Lys Val Ile Tyr Ser Gln Pro Ser Thr Arg Ser  
 275 280 285  
 Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val  
 290 295 300

<210> 11  
 <211> 1842  
 <212> DNA  
 <213> Homo sapiens

<400> 11  
 gtctgttccc aggagtcctt cggcggctgt tgtgtcagtg gcctgatcgc gatggggaca 60  
 aaggcgcaag tcgagaggaa actgttgtgc ctcttcatat tggcgatcct gttgtgctcc 120  
 ctggcattgg gcagtgttac agtgactct tctgaacctg aagtcagaat tcctgagaat 180  
 aatcctgtga agttgtcctg tgcctactcg ggcttttctt ctccccgtgt ggagtggaa 240  
 tttgaccaag gagacaccac cagactcgtt tgctataata acaagatcac agcttcctat 300  
 gaggaccggg tgaccttctt gccaaactggt atcaccttca agtccgtgac acgggaagac 360  
 actgggacat acacttgat ggtctctgag gaaggcggca acagctatgg ggaggtcaag 420  
 gtcaagctca tcgtgcttgt gcctccatcc aagcctacag ttaacatccc ctctctgcc 480  
 accattggga accgggcagt gctgacatgc tcagaacaag atggttcccc accttctgaa 540

39780-1216R1D4 saved November 17 2005.TXT

tacacctggt	tcaaagatgg	gatagtgatg	cctacgaatc	ccaaaagcac	ccgtgccttc	600
agcaactcct	cctatgtcct	gaatcccaca	acaggagagc	tggtctttga	tcccctgtca	660
gcctctgata	ctggagaata	cagctgtgag	gcacggaatg	ggtatgggac	acccatgact	720
tcaaatgctg	tgcgcatgga	agctgtggag	cggaatgtgg	gggtcatcgt	ggcagccgtc	780
cttghtaacc	tgattctcct	gggaatcttg	gtttttggca	tctggtttgc	ctatagccga	840
ggccactttg	acagaacaaa	gaaagggact	tcgagtaaga	aggtgattta	cagccagcct	900
agtgtcccga	gtgaaggaga	attcaaacag	acctcgtcac	tcctgggtgtg	agcctgggtcg	960
gctcaccgcc	tatcatctgc	atttgccctta	ctcaggtgct	accggactct	ggccccctgat	1020
gtctgtagtt	tcacaggatg	ccttattttgt	cttctacacc	ccacagggcc	ccctacttct	1080
tcggatgtgt	ttttaataat	gtcagctatg	tgccccatcc	tccttcatgc	cctccctccc	1140
tttctacca	ctgctgagtg	gcctggaact	tgtttaaaagt	gtttattccc	cattttctttg	1200
agggatcagg	aaggaatcct	gggtatgcc	ttgacttccc	ttctaagtag	acagcaaaaa	1260
tggtcggggg	cgcaggaatc	tgactcaac	tgcccacctg	gctggcaggg	atctttgaat	1320
aggtatcttg	agcttggttc	tgggtctttt	ccttgtgtac	tgacgaccag	ggccagctgt	1380
tctagagcgg	gaattagagg	ctagagcggc	tgaaatgggt	gtttggtgat	gacactgggg	1440
tccttccatc	tctggggccc	actctcttct	gtcttcccat	gggaagtgcc	actgggatcc	1500
ctctgccctg	tcctcctgaa	tacaagctga	ctgacattga	ctgtgtctgt	ggaaaatggg	1560
agctcttgtt	gtggagagca	tagtaaattt	tcagagaact	tgaagccaaa	aggattttaa	1620
accgctgtc	taaagaaaag	aaaactggag	gctgggcgca	gtggctcacg	cctgtaatcc	1680
cagaggctga	ggcaggcgga	tcacctgagg	tcgggagttc	gggatcagcc	tgaccaacat	1740
ggagaaacc	tactggaaat	acaaagttag	ccaggcatgg	tggtgcatgc	ctgtagtccc	1800
agctgctcag	gagcctggca	acaagagcaa	aactccagct	ca		1842

<210> 12

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Primer

<400> 12

tcgcgagct gtgttctgtt tccc

24

<210> 13

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Hybridization Probe

<400> 13

tgatcgcat ggggacaaag gcgcaagctc gagaggaaac tgttgtgcct

50

<210> 14

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Primer

<400> 14

acacctggtt caaagatggg

20

<210> 15

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Primer



<400> 15  
taggaagagt tgctgaaggc acgg 24

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Primer

<400> 16  
ttgccttact caggtgctac 20

<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Primer

<400> 17  
actcagcagt ggtaggaaag 20

<210> 18  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Primer

<400> 18  
tatccctcca attgagcacc ctgg 24

<210> 19  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Primer

<400> 19  
gtcgaagac atcccaacaa g 21

<210> 20  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Primer

<400> 20  
cttcacaatg tcgctgtgct gctc 24

<210> 21  
<211> 24  
<212> DNA  
<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Primer

&lt;400&gt; 21

agccaaatcc agcagctggc ttac

24

&lt;210&gt; 22

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Hybridization Probe

&lt;400&gt; 22

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat

50

&lt;210&gt; 23

&lt;211&gt; 260

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 23

```

Leu Ala Leu Gly Ser Val Thr Val His Ser Ser Glu Pro Glu Val Arg
 1      5      10      15
Ile Pro Glu Asn Asn Pro Val Lys Leu Ser Cys Ala Tyr Ser Gly Phe
      20      25      30
Ser Ser Pro Arg Val Glu Trp Lys Phe Asp Gln Gly Asp Thr Thr Arg
      35      40      45
Leu Val Cys Tyr Asn Asn Lys Ile Thr Ala Ser Tyr Glu Asp Arg Val
      50      55      60
Thr Phe Leu Pro Thr Gly Ile Thr Phe Lys Ser Val Thr Arg Glu Asp
      65      70      75      80
Thr Gly Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Gly Asn Ser Tyr
      85      90      95
Gly Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro Ser Lys Pro
      100      105      110
Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg Ala Val Leu
      115      120      125
Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr Trp Phe
      130      135      140
Lys Asp Gly Ile Val Met Pro Thr Asn Pro Lys Ser Thr Arg Ala Phe
      145      150      155      160
Ser Asn Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly Glu Leu Val Phe
      165      170      175
Asp Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr Ser Cys Glu Ala Arg
      180      185      190
Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn Ala Val Arg Met Glu Ala
      195      200      205
Val Glu Arg Asn Val Gly Val Ile Val Ala Ala Val Leu Val Thr Leu
      210      215      220
Ile Leu Leu Gly Ile Leu Val Phe Gly Ile Trp Phe Ala Tyr Ser Arg
      225      230      235      240
Gly His Phe Asp Arg Thr Lys Lys Gly Thr Ser Ser Lys Lys Val Ile
      245      250      255
Tyr Ser Gln Pro
      260

```

&lt;210&gt; 24

&lt;211&gt; 270

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 24

Val Arg Val Thr Val Asp Ala Ile Ser Val Glu Thr Pro Gln Asp Val  
 1 5 10 15  
 Leu Arg Ala Ser Gln Gly Lys Ser Val Thr Leu Pro Cys Thr Tyr His  
 20 25 30  
 Thr Ser Thr Ser Ser Arg Glu Gly Leu Ile Gln Trp Asp Lys Leu Leu  
 35 40 45  
 Leu Thr His Thr Glu Arg Val Val Ile Trp Pro Phe Ser Asn Lys Asn  
 50 55 60  
 Tyr Ile His Gly Glu Leu Tyr Lys Asn Arg Val Ser Ile Ser Asn Asn  
 65 70 75 80  
 Ala Glu Gln Ser Asp Ala Ser Ile Thr Ile Asp Gln Leu Thr Met Ala  
 85 90 95  
 Asp Asn Gly Thr Tyr Glu Cys Ser Val Ser Leu Met Ser Asp Leu Glu  
 100 105 110  
 Gly Asn Thr Lys Ser Arg Val Arg Leu Leu Val Leu Val Pro Pro Ser  
 115 120 125  
 Lys Pro Glu Cys Gly Ile Glu Gly Glu Thr Ile Ile Gly Asn Asn Ile  
 130 135 140  
 Gln Leu Thr Cys Gln Ser Lys Glu Gly Ser Pro Thr Pro Gln Tyr Ser  
 145 150 155 160  
 Trp Lys Arg Tyr Asn Ile Leu Asn Gln Glu Gln Pro Leu Ala Gln Pro  
 165 170 175  
 Ala Ser Gly Gln Pro Val Ser Leu Lys Asn Ile Ser Thr Asp Thr Ser  
 180 185 190  
 Gly Tyr Tyr Ile Cys Thr Ser Ser Asn Glu Glu Gly Thr Gln Phe Cys  
 195 200 205  
 Asn Ile Thr Val Ala Val Arg Ser Pro Ser Met Asn Val Ala Leu Tyr  
 210 215 220  
 Val Gly Ile Ala Val Gly Val Val Ala Ala Leu Ile Ile Ile Gly Ile  
 225 230 235 240  
 Ile Ile Tyr Cys Cys Cys Cys Arg Gly Lys Asp Asp Asn Thr Glu Asp  
 245 250 255  
 Lys Glu Asp Ala Arg Pro Asn Arg Glu Ala Tyr Glu Glu Pro  
 260 265 270

&lt;210&gt; 25

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 25

Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His Ser Ser Glu Pro  
 1 5 10 15  
 Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu Ser Cys Ala Tyr  
 20 25 30  
 Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe Asp Gln Gly Asp  
 35 40 45  
 Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr Ala Ser Tyr Glu  
 50 55 60  
 Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe Lys Ser Val Thr  
 65 70 75 80  
 Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Gly  
 85 90 95  
 Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro  
 100 105 110  
 Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg  
 115 120 125  
 Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr  
 130 135 140

39780-1216R1D4 saved November 17 2005.TXT

Thr	Trp	Phe	Lys	Asp	Gly	Ile	Val	Met	Pro	Thr	Asn	Pro	Lys	Ser	Thr
145					150					155					160
Arg	Ala	Phe	Ser	Asn	Ser	Ser	Tyr	Val	Leu	Asn	Pro	Thr	Thr	Gly	Glu
				165					170					175	
Leu	Val	Phe	Asp	Pro	Leu	Ser	Ala	Ser	Asp	Thr	Gly	Glu	Tyr	Ser	Cys
			180					185					190		
Glu	Ala	Arg	Asn	Gly	Tyr	Gly	Thr	Pro	Met	Thr	Ser	Asn	Ala	Val	Arg
		195					200					205			
Met	Glu	Ala	Val	Glu	Arg	Asn	Val	Gly	Val	Ile	Val	Ala	Ala	Val	Leu
	210					215					220				
Val	Thr	Leu	Ile	Leu	Leu	Gly	Ile	Leu	Val	Phe	Gly	Ile	Trp	Phe	Ala
225					230					235					240
Tyr	Ser	Arg	Gly	His	Phe	Asp	Arg	Thr	Lys	Lys	Gly	Thr	Ser	Ser	Lys
				245					250					255	
Lys	Val	Ile	Tyr	Ser	Gln	Pro									
			260												

<210> 26  
 <211> 273  
 <212> PRT  
 <213> Homo sapiens

<400>	26														
Leu	Cys	Ala	Val	Arg	Val	Thr	Val	Asp	Ala	Ile	Ser	Val	Glu	Thr	Pro
1				5					10				15		
Gln	Asp	Val	Leu	Arg	Ala	Ser	Gln	Gly	Lys	Ser	Val	Thr	Leu	Pro	Cys
			20					25					30		
Thr	Tyr	His	Thr	Ser	Thr	Ser	Ser	Arg	Glu	Gly	Leu	Ile	Gln	Trp	Asp
		35					40					45			
Lys	Leu	Leu	Leu	Thr	His	Thr	Glu	Arg	Val	Val	Ile	Trp	Pro	Phe	Ser
	50					55					60				
Asn	Lys	Asn	Tyr	Ile	His	Gly	Glu	Leu	Tyr	Lys	Asn	Arg	Val	Ser	Ile
65					70					75					80
Ser	Asn	Asn	Ala	Glu	Gln	Ser	Asp	Ala	Ser	Ile	Thr	Ile	Asp	Gln	Leu
			85						90					95	
Thr	Met	Ala	Asp	Asn	Gly	Thr	Tyr	Glu	Cys	Ser	Val	Ser	Leu	Met	Ser
			100					105					110		
Asp	Leu	Glu	Gly	Asn	Thr	Lys	Ser	Arg	Val	Arg	Leu	Leu	Val	Leu	Val
		115					120					125			
Pro	Pro	Ser	Lys	Pro	Glu	Cys	Gly	Ile	Glu	Gly	Glu	Thr	Ile	Ile	Gly
						135					140				
Asn	Asn	Ile	Gln	Leu	Thr	Cys	Gln	Ser	Lys	Glu	Gly	Ser	Pro	Thr	Pro
145					150					155					160
Gln	Tyr	Ser	Trp	Lys	Arg	Tyr	Asn	Ile	Leu	Asn	Gln	Glu	Gln	Pro	Leu
				165					170					175	
Ala	Gln	Pro	Ala	Ser	Gly	Gln	Pro	Val	Ser	Leu	Lys	Asn	Ile	Ser	Thr
			180					185					190		
Asp	Thr	Ser	Gly	Tyr	Tyr	Ile	Cys	Thr	Ser	Ser	Asn	Glu	Gly	Thr	
		195					200					205			
Gln	Phe	Cys	Asn	Ile	Thr	Val	Ala	Val	Arg	Ser	Pro	Ser	Met	Asn	Val
	210					215					220				
Ala	Leu	Tyr	Val	Gly	Ile	Ala	Val	Gly	Val	Val	Ala	Ala	Leu	Ile	Ile
225					230					235					240
Ile	Gly	Ile	Ile	Ile	Tyr	Cys	Cys	Cys	Cys	Arg	Gly	Lys	Asp	Asp	Asn
				245					250					255	
Thr	Glu	Asp	Lys	Glu	Asp	Ala	Arg	Pro	Asn	Arg	Glu	Ala	Tyr	Glu	Glu
			260					265					270		
Pro															

<210> 27

<211> 413

<212> DNA

<213> Artificial Sequence

<220>

<223> Consensus DNA Sequence

<400> 27

```
ctcgagccgc tcgagccgtg cggggaaata tcgttgtaga gttagtgcc catctgagca 60
aggccaaaac ctggaagagg atacagtcac tctggaagta ttagtggctc cagcagttcc 120
atcatgtgaa gtaccctctt ctgctctgag tggaaactgtg gtagagctac gatgtcaaga 180
caaagaaggg aatccagctc ctgaatacac atggtttaag gatggcatcc gtttgctaga 240
aaatcccaga cttggctccc aaagcaccaa cagctcatac acaatgaata caaaaactgg 300
aactctgcaa ttttaactcg tttccaaact ggacactgga gaatattcct gtgaagcccg 360
caattctgtt ggatatcgca ggtgtcctgg ggaaacgaat gcaagtagat gat 413
```

<210> 28

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Primer

<400> 28

atcggttgtaga agttagtgcc cc 22

<210> 29

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Primer

<400> 29

acctgcgata tccaacagaa ttg 23

<210> 30

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Hybridization Probe

<400> 30

ggaagaggat acagtcactc tggaagtatt agtggctcca gcagttcc 48